From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: 1934 Radio News
Message-ID: <199701200536.WAA02111@netcom8.netcom.com>

As Allan Fritsche discourses
>
> It stated: Can you invent these?
>
> 1. An entirely new and practical low-priced television system or.
>
> 2. A combination of known television ideas into a new and practical low priced
> television system.
>
> 3. A portable pocket-sized transmitter and receiver with self contained power
> supply capable of working 25 miles.
>
> 4. A perfected system of eliminating static in radio reception that can be
> attached to any set.
>
> 5. An automatic volume control system that entirely eliminates fading and
> that would bring in all stations, local and distance, with exactly the same
> volume.
>
> Now my point, I think 1,2,3 have been done, What about 3 and 4?
>
1 and 2 were "done" around 1937-8. The British Marconi 405 line
system (1936) and the US "experimental" 441 line systems (actually
'36)---with 1938-9 advances in receiver design, probably met the
criteria.

3. I think the Motorola WWII Walkie-Talkie did this.

4. Armstrong's FM went a long ways (not absolute) toward meeting
this.

5. This actually was possible with 1934 technology. If you take the
standard-type AVC output and feed it forward into the audio section,
you can adjust it for 0.0db audio level change over about a 60db
antenna signal change. AVC is a servo loop, so has to have a slope if
it controls gain in the stages preceding it. The 1938 Radio Wire
Television 43B (I had one for several years) had such an audio control
circuit, and while absolutely flat, came pretty close.

The "dual diversity" setups of the thirties and forties gave plenty of
improvement on shortwave fading.

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Hank van Cleef
E-mail vancleef@netcom.com or vancleef@tmn.com
==========

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: 545/547/549
Message-ID: <199701200524.WAA01167@netcom8.netcom.com>

As Richard L Paton discourses
>
> Hi, Bill.
> Question: Is a 545 feasibly modifiable to trigger as well or close to as
> well as the other TEK's you mentioned? I'm glad you brought it up. I'd
> forgotten those, I think they were somewhat scarce due to $$$, compared
> to the workhorse, but not cheap 545. I've got a 19 fifty something Tek
> catalog with list prices someplace (Paper Mountain again!). Was a 545
> like, $ 5,450.00? I have to find that paper !
> Thanks, Rich P

As I recall, 530-540 series, no suffix and A suffix, all had similar triggers (some circuitry changed over the years, but same basic performance). The 547, 546, 544, 545B, 543B I think all got tunnel diode triggers, which extended trigger sensitivity out from about 100 nsec to scope mainframe risetime and above.

Is conversion feasible/possible etc.? Yes, anything is "possible." Is it advisable? I don't really think so. Of course, if you've got a junker scope you can always pirate components if you really want to. However, one of the later (547, 545B) would really have to be in really terrible condition for me to consider parting it out.

Since I have a 533A, with the infamous 5 Mhz. trigger setup, and use it on the type of equipment most hams talk about and work on, I'll note that it works well enough on RF signals out beyond the scope's bandpass, using HF Sync, that I wouldn't consider changing even one solder connection to "improve" it, much less all the stuff needed to install the TD version. Also, Tunnel diodes are a bit hard to come by these days. Where triggering becomes a problem with the older trigger setups is with pulses that don't have a constant repetition rate.

If you are familiar with the older RCA and Dumont sweep setup, where the sweep is always free-run, and the vertical signal is used as a synchronization signal, similar to TV horizontal and vertical synchronization, and have used these scopes, you know that they are

fairly easy to synchronize with fixed-frequency AF/RF signals. The HF Synch mode on a Tek scope provides essentially the same capability, and seems to me quite satisfactory when I am working with RF. I'll note that I am quite happy with the 533A as a bench scope, and there are very few Tek models that I'd choose to replace it, even though the whole 540 and 580 series lines have much higher bandpass. A 547/6/4 or 545B/543B, clean working calibrated on my bench would inspire me to offer the 533A with a bunch of plug-ins to someone who would give it a nice home. Other than that, I'll stick with the current toy, complete with any supposed "deficiencies" in things like the trigger circuit. In short, when I want a display, I get one, and don't recall ever going through any jiggery pokery to get a stable trace on the scope.

So far as original prices go, I have a very distinct recollection that in the 1961-63 period, a 545A/CA and two probes sold FOB Beaverton for $1725, and we sold that configuration like hotcakes. 535A, same configuration, was something like $150 less; 585A/82 with probes was around $150 more; 547 was introduced in '63 as I recall (may have been early 64) for about the 585A price, configured with 1A1, and I think the 585A price got jacked a bit. Stan may have more accurate info, but I think this will give you the general picture. In short, you could have a good Tek scope with a plugin and probes for about the same price as a Volkswagen Beatle, from about 1955-70.

So far as the 549 goes, it is a storage scope, which means (at least to me) that it is less desirable than others in the 530-40 series unless you have use for the storage feature. As a general-purpose bench scope for audio and ham radio work, a 531, CA, and K, with probes, is difficult to beat, even though that is the "minimum" configuration in the whole 530-40 series (except 532---which is pretty much a "school" scope, or 536, which is a slow X-Y scope). The 547/1A1 is, I think, the top of the line in that series, and offers very impressive improvements on a spec sheet. But I think you'll find that for the kind of bench work we talk about on this list, there are not that many occasions when that performance will show up on the CRT as a display, compared to the 531.

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==========
Hank van Cleef
E-mail vancleef@netcom.com or vancleef@tmn.com
==========

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: w7ni@teleport.com (Stan Griffiths)
Subject: RE: 545/547/549

Message-ID: <199701201804.KAA19542@kim.teleport.com>

>Hi, Bill.
>Question: Is a 545 feasibly modifiable to trigger as well or close to as
>well as the other TEK's you mentioned? I'm glad you brought it up. I'd
>forgotten those, I think they were somewhat scarce due to $$$, compared
>to the workhorse, but not cheap 545. I've got a 19 fifty something Tek
>catalog with list prices someplace (Paper Mountain again!). Was a 545
>like, $ 5,450.00? I have to find that paper !
>Thanks, Rich P
> # # #

It's not feasable to modify a 545 to trigger like a 547. About 5 MHz is all you can reasonable expect a 545 to trigger at, reliably.

The last (highest) price a 545 was listed at appeared in the 1958 Tek catalog. It was $1450. (Page 291, OSCILLOSCOPES--Selecting and Restoring a Classic)

Stan w7ni@teleport.com

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: EdKB2NSP@aol.com
Subject: BA Parts Here - Hard Drive Crashed
Message-ID: <970120122259_1012475582@emout17.mail.aol.com>

Help !!! Had a total loss of my communications files including Addresses for parts to send out. Got an NC-300 xtal filter and Heath feet and spacers sitting here without a destination now ! Also lost info on B&W 5100 dial scale, and DX-100 parts swap
     Did a Backup just before xmas, but am missing a lot of correspondence !

Ed K.

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: BEN NOCK <106312.1035@compuserve.com>
Subject: BA radiation..... HELP !!!!!!!!
Message-ID: <199701201307_MC2-FA2-3F42@compuserve.com>

With the recent posting regarding radiation on Japanese
rigs, I got out my meter and measured.

On my big S-P3A set, the radiation was as follows:

Beta & Gamma   contact with the surface   dial 5 m/r.h

meter 1.5 m/r.h

6 inch away 0.1 m/r.h

Gamma only contact with the surface dial 0.5 m/r.h
6 inch away below 0.001 m/r.h

So, will any authority on the subject, tell me what this means.
I'm sure the rad is higher off my 29 set though, and I was told
by a museum that they had been advised to move their 29 set
further back from the flight line.

All good stuff, eh !! Cheers, Ben (glow in the dark G4BXD)

No lights needed in this shack !

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Kevin McDonald <kevin.mcdonald@tivoli.com>
Subject: BA Sighting: Cloak and Dagger
Message-ID: <32E3A353.94A@tivoli.com>

Within the first 5 minutes I spotted 2 BC-342's on one bench.
(What could be better than 1 BC-342!)
There was a variety of test equipment that may or may not
have been RF related.
There was also use of a briefcase contained CW unit that
apparently ran off 110 volts - is this a real unit or
a product of Hollywoodís imagination?

73 Kevin N5OJF

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: "William B. Ross" <billross@txdirect.net>
Subject: Re: BA Sighting: Cloak and Dagger
Message-ID: <32E3F7DA.40A7@txdirect.net>

What movie?

Bill K5LLK

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Rich Arland <qrprich@postoffice.worldnet.att.net>

Subject: BAs Prevail - VK0IR WKD!
Message-ID: <19970120213817.AAA28117@LOCALNAME>

Gang:

This afternoon at 2103Z I worked VK0IR with the Halli SX-117/HT-44
boatanchor rig. Used a Heil HC-4 mic element in a Optimus (Rat Shack)
headset/boom mic clip-leaded to the HT-44 mic jack. Transmitting about 25
watts SSB (that's all she puts out!) on 14.208 receiving VK0IR on 14.195. In
addition to the 599 rpt, the Heard Isl. Op said "Nice audio", at which time
I told him what I was running.

I'm in the log! Unfortunately, it was not a full QRP QSO, but 25 watts
against the mega kilowatt stations trying to contact VK0IR does stand out!
Now to wk him on 14.024 with the Sierra.

73 rich K7SZ

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: "David L. Thompson" <thompson@mindspring.com>
Subject: Re: BAs Prevail - VK0IR WKD!
Message-ID: <199701202238.RAA94794@mule0.mindspring.com>

K7SZ wrote:
>This afternoon at 2103Z I worked VK0IR with the Halli SX-117/HT-44
>boatanchor rig. Used a Heil HC-4 mic element in a Optimus (Rat Shack)
>headset/boom mic clip-leaded to the HT-44 mic jack. Transmitting about 25
>watts SSB (that's all she puts out!) on 14.208 receiving VK0IR on 14.195. In
>addition to the 599 rpt, the Heard Isl. Op said "Nice audio", at which time
>I told him what I was running.

I worked VK0IR on 40 CW with the HQ170C and BW 5100B barefoot into my 40 M beam.
2nd call, too.   Used an old heath HD 1410 keyer.   They operate 7007 listen
UP 3 to 5 and 7022
listen above 7025.   Bet more old glow bugs can make the grade between 00
and 0300Z daily.

BTW I use the Heil HC-4 in the Heil BM-10 for my AM on the Elmac A-54H and
AF-67. Works great!

Dave K4JRB

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: ALanger394@aol.com

Subject: collins mechanical filter idetification
Message-ID: <970120130229_816402352@emout18.mail.aol.com>

Hi fellow ba's

Please can any one help me to identify the following collins mechanical filters

1. F455Y21 6431 pt no 526 9337 00

2. F455219 6815 pt no 526 9630 010

thanks

Allan Langer

alanger394@aol.com

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: n5off@w5ddl.aara.org
Subject: Cosmos PTO info
Message-ID: <560327@w5ddl.aara.org>

Jose, you have apparently two things going on.

1) Your endpoints need adjustment. Adjust the endpoint adjusting screw such that the unit's output is 1000 kcs in exactly 10 turns.

B) Your linearizing effort is to be done with a different adjustment. Look for a screw cap on the front of the PTO different from the one you used to adjust the endpoints. Under this screw there is a linearizing adjustment consisting of (I think) 40 adjusting screws which pass by the hole as the PTO is advanced through its range. Fourty screw enable adjustment at every 25 kcs. You can actually skip three of the four that pass by the hole and linearize at 100 kcs increments (with the calibrator as a source) or use a modern generator and go the 25 kcs route (what a man!).

Do 1) above first and then check to see if you need to do B) at all. You may be satisfied with 1).

73 Bonne Chance!

Tom N5OFF

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: jkh@lexis-nexis.com (John Heck)
Subject: Dynamotor Brushes?
Message-ID: <9701201516.AA09058@beans.lexis-nexis.com>

Folks,
I have a package of Brush and spring assemblies which I believe to be for some kind of dynamotor. The package reads:

Receiver Equipment - Model RDR
Manufacturor - Radio Corporation of America
Brush and Spring assem.
Symbol #D-801 A & B
Army Stock No. 3H550-26

I have 3 sets of these and will send a set to anybody who wants them for $5 which oughta cover getting them packed up and shipped out. Let me know if you want a set.
If I'm wrong about these maybe somebody will let me know what kind of receiver gear they are for. Thanks.
Regards,
John Heck, KC8ETS
1009 Donson Drive
Dayton, Ohio 45429
(513)865-7036(work)
jkh@lexis-nexis.com

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Jack Harper <jharper@bs2000.com>
Subject: Electrolytic Cap Failure Modes?
Message-ID: <199701202148.OAA17546@lynx.csn.net>

I am feverishly (between 10pm-2am) going through my wonderful HQ-180 (class of Nov '59) with a 'fine tooth comb'...

Question: I have discovered two electrolytic caps (not in the power supply but rather in the AVC and the audio output) that read about twice their supposed capacitance on my trusty Fluke capacitance meter (wonderful thing -- that Fluke). These guys are kind of like I am becoming -- a bit discolored and a little bumpy with age...

I would assume (for no particular reason) that electrolytics would drop in capacitance as they age (their resistance measure ok).

Question: What is the typical failure mode for an aging electrolytic?

Regards to all

Jack, KC0LR (Friend to all things Hammarlund)

Jack Harper   Bank Systems 2000, Inc.
e-mail: jharper@bs2000.com   350 Indiana Street, Suite 800
voice: 303-277-1892 fax: 303-277-1785   Golden, Colorado 80401 USA

                "21st Century Financial Applications"
        Optical Cards for Bank, EBT, and Medical Applications
Visit our Web Page: http://www.bs2000.com/talos (Last Update: 960926)

      1024-bit PGP crypto key with ID: 8FB07075 created 960728
    Fingerprint: 75 DA 06 35 F8 3D AC EC 3A F2 7C 59 A1 11 A5 74
      Key available from Public Key Servers and above Web Page
---

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: bdhall@ghg.net (Benjamin D. Hall)
Subject: Re: Electrolytic Cap Failure Modes?
Message-ID: <32E3FA37.3335@GHG.net>

Jack Harper wrote:

> Question: I have discovered two electrolytic caps (not in the power supply
> but rather in the AVC and the audio output) that read about twice their
> supposed capacitance on my trusty Fluke capacitance meter (wonderful thing
> -- that Fluke). These guys are kind of like I am becoming -- a bit
> discolored and a little bumpy with age...

Hi Jack, the first thing I'd check is the accuracy of the Fluke. One of the things Hank Van Cleef has beat into my noggin is to always look at how you are doing the measurement before using the measurement. I've got a Fluke 12 with the capcitance scale and, and if I remember correctly, it is only good to +/-10% anyways. But, you are far enough out of that 10% to not suspect the meter I'd say. (Unless it is out of cal.)

Second, check the tolerances on those caps. Most electrolytics manufactured today are -10% +50% devices, so maybe back in 1958 +100% might have been the best they could do and keep prices down.

Typical failure modes I've seen and heard about for both electro's and others: (keep in mind I'm no expert in these things)

1) Leakage. They turn into resistors. You can test them on a VTVM or DMM, look for low ohms. Like several megohms. Hank, Larry, Barry, or Stan can provide better info as to what the lowest tolerable megohm point is. However, some caps don't leak at VTVM voltages, and the only way to see the leakage is to test for it. I'll let the heavier hitters like Hank, Larry, Barry, and Stan talk about this, as I'm not really versed on it.

2) BANG! They short out and go bang like a firecracker. I've seen Hank refer to wax papers as "wax paper firecrackers" and I don't know if this is becuase they look like little firecrackers or if they act like one! I've never had one fail like this on me, but have read the stories.

3) They turn into open circuits. This was new to me until several days ago when I found that C603, a 3 by 30 uF 300 volt electrolytic in my R-390A audio deck, had lost all capacitance in the A section. The Fluke 12 read 0 uF. Upon dissection, it appeared that the lead into the goop in the can was corroded away completely.

4) They fizzle out and lose capacitance. Perhaps our resident chemical expert and all around good guy Barry Ornitz can give us a lesson in the chemistry of electrolytics and what happens when they lose capacitance? I do know that electolytics do have finite lifetimes. In fact, I recently bought 'lytic caps from Mouser with a 3000 hour lifetime for some project or another.

Anyone add anything else here?

Thanks and 73,
Ben
--

From the computer of	Collector of fine firebottle
Benjamin D. Hall, Houston Texas	equipment, as well as other things
BDHall@GHG.net (home) -or-	involving Earth, Air, Water, and
Benjamin.D.Hall1@JSC.NASA.gov	Fire.

PLEASE NOTE MY NEW HOME E-MAIL ADDRESS above. My old address, BDHALL@GHGCorp.com, will still work for a period of time however.

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: Electrolytic Cap Failure Modes?
Message-ID: <199701202330.QAA23763@netcom5.netcom.com>

As Jack Harper discourses
>
> I am feverishly (between 10pm-2am) going through my wonderful HQ-180 (class
> of Nov '59) with a 'fine tooth comb'...
>
> Question: I have discovered two electrolytic caps (not in the power supply
> but rather in the AVC and the audio output) that read about twice their
> supposed capacitance on my trusty Fluke capacitance meter (wonderful thing
> -- that Fluke). These guys are kind of like I am becoming -- a bit
> discolored and a little bumpy with age...

Well, that says you've got healthy electrolytics. Tolerance on filter
cap electrolytics like Mallory FP was -10+100%. Some went even
higher.
>
> I would assume (for no particular reason) that electrolytics would drop in
> capacitance as they age (their resistance measure ok).

Yup
>
> Question: What is the typical failure mode for an aging electrolytic?
>
They dry out and lose capacitance, or the electrodes develop series
resistance and they look like RC inside, with lots of R.

Drys seem to short rarely, although they do do it.

The old wets shorted out---corrosion products.

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Hank van Cleef
E-mail vancleef@netcom.com or vancleef@tmn.com
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From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: Bill Meara <wmeara@erols.com>
Subject: Frostfest Fun
Message-ID: <199701201005.FAA32749@mx01.erols.com>

I thought Frostfest in Richmond was a lot of fun. To me it looked like a
big 'fest (but I haven't been to many); the parking lot looked like some
sort of aluminum orchard!

The highlight for me was meeting several distinguished Anchorologists: Nick

England, KD4CPL; John Poulton, ex-K4QDR; David Nance, WB4SSE; Paul Bernhardt, KF4FOR;
Dave, K4SAN and Dave, W4EJ. I missed seeing John Brewer, WB5OAU/4; Joe Lutz, W7LPF; Mike Steussy AE4R; Bill Bershears, WC3K and Boatanchor Bob, NA4G. I made several efforts at paging these missing Anchorites. At one point a fellow arrived announcing, "I'm John Brewer!" but he gave me this baffled look when I started talking about Boatanchors and thanking him for his Web page! Wrong John Brewer!

Nick did a fine job of organizing a noon-time BA list rendezvous at the concession stand. List members compared notes on 'anchors that had been spotted during the morning. We briefly considered sending out a spoof message to the list reporting on some of the gear and prices we saw in Richmond (Mint KWM-2s for 75 dollars!!!!), but the lure of the tables pulled us apart before we could get our plot together.

I came away with some typical 'fest junk: A box for my variac, a Tandy TRS-80 Model 100 computer (future cyber-anchor), some tubes for my Twoer, a one dollar TV from Nick (John was selling a Heathkit TV that he'd made himself!), and a Heathkit VTVM for 12 dollars. I came home very pleased.

I think we need to think about some sort of system to make it easier for list members to find each other at 'fests. I don't know, maybe funny hats or something... I defer to the more veteran festers in the group for suggestions.

73 De N2CQR
Bill Meara
Hallicrafters, Heaths and Hammarlunds
QTH: Falls Church, Virginia, USA
Formerly of Tegucigalpa, Bilbao and Santo Domingo
wmeara@erols.com
http://www.mindspring.com/~johnmb/billm.htm

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Dennis Gibbs <dgibbs@rational.com>
Subject: RE: Frostfest Fun
Message-ID: <01BC06C7.5E7C6340@meninx.ppp.rational.com>

From: Bill Meara[SMTP:wmeara@erols.com]
Sent: Sunday, January 19, 1997 11:08 PM

Subject: Frostfest Fun

I think we need to think about some sort of system to make it easier for
list members to find each other at 'fests. I don't know, maybe funny hats
or something... I defer to the more veteran festers in the group for
suggestions.

I have to second this suggestion; I went to the Frostfest and the only BA list
member I managed to meet wasx Nick England. Unfortunately, I had to
leave before the noon gathering, but it would have been nice to have met
more of the list!

Dennis Gibbs
dgibbs@rational.com

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Paul Bernhardt <bern@ppdu.nrl.navy.mil>
Subject: RE: Frostfest Fun
Message-ID: <Pine.A32.3.91.970120130507.42645A-100000@ppdu.nrl.navy.mil>

On Mon, 20 Jan 1997, Dennis Gibbs wrote:

>
>
> ----------
> From: Bill Meara[SMTP:wmeara@erols.com]
> Sent: Sunday, January 19, 1997 11:08 PM
> To: Multiple recipients of list
> Subject: Frostfest Fun
>
> I think we need to think about some sort of system to make it easier for
> list members to find each other at 'fests. I don't know, maybe funny hats
> or something... I defer to the more veteran festers in the group for
> suggestions.
>
> I have to second this suggestion; I went to the Frostfest and the only BA list
> member I managed to meet wasx Nick England. Unfortunately, I had to
> leave before the noon gathering, but it would have been nice to have met
> more of the list!
>
> Dennis Gibbs
> dgibbs@rational.com
>

>
>
Dennis,
  I also promote this idea. I suggest orange-red "cathode glow" name tags. I didn't even get to meet Nick England because he was not at his table when I stopped by. Also, instead of a noon gathering, how about a 10 AM gathering because all of the BA list members will surely get to the hamfests early for the best deals.
Paul Bernhardt, KF4FOR

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: joelutz@juno.com (Joseph W Lutz)
Subject: Re: Frostfest Fun
Message-ID: <19970120.233211.2870.0.JOELUTZ@juno.com>

The Frostfest to me was like a kid in a candy store. It was my first really good sized hamfest. I went to one up in Western Pa after returning to the states this past summer, but the size of it was about 1/20th of what was at Richmond. I am sorry that I missed running into you Bill and the rest of the Anchorites. I got there at around 9:00 and left around 12:30. I got tired walking back and forth between two Heath Linears, the SB201 and the SB230. I finally gave in and hauled the 201 to the Blazer. I got it because it had the 10 meter modification from the factory put in it. Now all I have to do is either upgrade my power panel, or rewire the 201 for 110V ops while here in Va. The one piece of BA equipment that impressed a 'Yeni-BAer' like me was that Collins 30-L1 that was a 10-plus. Got into a discussion with an Air Force Mars associate re: the 30-L1 and had to go back and see the one that was being offered, as I had never ran across one with (4) 811's. Mine has (2) 811's mounted horizontally, and of course runs at half the output power of the other one. Guess the KWM-2A/30-L1 pairs that the Foreign Service used overseas were the 'reduced configuration type' for their now-defunct E&E HF networks. I could have came home with the Blazer filled to the top, but then again I would have had to find some room in it to sleep, as the wife surely wouldn't understand. As it was, went I came in the door, with a replacement on/off switch for my Diawa PS, she just grinned and said, 'That isn't all, is it'? I hauled in the 201 and she said, "at least you had fun'". I was told that I missed a MINT Adventurer, but then again it was taken before the doors even opened - and people talk about missing things on this group! The old adage applies - you have to be in the right place at the right time.   Looking forward to my next fest and hopefully meeting the people I missed this time.
73 de JOE
- - - - - - - - - - - - - - - - -W7LPF/4 (NNN0KUU)- - - - - - - - - - - - - - -
QWCA - NCVA - SOWP - FISTS

Gordonsville, Va 22942 (Orange County)
WTB: EFJ Adventurer, Hallicrafter HT32
- -
- - - - - - - - - - - -

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: J P Taillebois <jpt1@idirect.com>
Subject: FS/hawkins practical library of electricity circ.1922
Message-ID: <199701202224.RAA10210@nemesis.idirect.com>

>Date: Sat, 18 Jan 1997 18:43:55
>To: boatanchors net
>From: J P Taillebois <jpt1@idirect.com>
>Subject: FS/hawkins practical library of electricity circ.1922
>
>hi, everyone
>
>I have 9 of the 10 pocket books of hawkins. book number 9 is missing.
>
>All books are complete inside. no tears no missing pages. Covers ok but are
70 years old.
>
>Any interest make me an offer...
>
>73
>
Jean Paul Taillebois 996 Greenlane court, Oshawa, Ontario,Canada M1K-2C6
e.mail jpt1@idirect.com
packet: ve3jpt@va3vw
voice:905-723-1811
fax/data:905 723-9156
Collector: Hallicrafters,Central-Electronic,Gonset, Military BA, antique
radio memorabilia.

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: FRANKK6NL@aol.com
Subject: German Radar in WW2
Message-ID: <970120154524_1419853732@emout07.mail.aol.com>

Some recent comments re magnetrons and early radar history on the net
particularly about the state of the art and Germany vs Britain suggests that
the subject deserves a review.

Germany had very advanced radars at the start of WW2. Following info is from

Price "History of Electronic Warfare".

They had 100 FREYAs operational in 1938 for aircraft detection and tracking.The FREYA operated on 125Mhz with a peak power of 15 to 20 Kw and a range of 100 miles.Over 1000 units were built during the course of the war.

The SEEKAKT was first installed on the Graf Spee and used for surface search and gun ranging.It operated on 120-150 Mhz with a peak power of 8 Kw and had a range of 50 to 100 miles (depending on the site of course).About 200 such equipments were built for warships primarily.

The WUERZBURGs became operational in 1940 and was used with gun batteries for AA control. It operated on 553 to 566 Mhz with a peak power of 7-11 Kw. It used a dish antenna and conical scan for precise aiming.The objective was to equip every AA battery with a Wuerzberg. Over 5000 were built during the war.

In contrast in 1938 the British were just beginning to put together their HOME CHAIN radar system for aircraft detection using directional antenna arrays hung between towers and operating in the range of 20 to 50 Mhz. And in 1938 the USA had only gotten around to installing experimental aircraft detection radars on ships. It was not until 1940 that the CXAM started to be installed on capital ships.The Army SCR368 appeared in early 1941.

The following comments are just some humble ones of mine.

All the above of course used state of then art of vacuum tubes in their transmitters. SHF equipments using magnetrons did not enter USNavy service until 1942 and then for surface detection,navigation and gun control. Through out the war and for sometime afterwards we continued to use tube equipments and bedspring antennas on 100 to 200 Mhz for aircraft detection and control. Incidently the British CHAIN remained their primary aircraft detection system up to the end of the war and by then had built up to over 1000 stations located all around the British Isles and including N. Ireland. Most of their transmitters were real big brothers with watercooled tubes and beaucoup peak watts.

They are those who say that the British with inferior equipment made better tactical use of it than the Germans - though it is also said the British ground observer force was an equally important factor in the British system of aircraft detection and fighter control in the Battle of Britain.The Germans on the other hand used their setup primarily for gun control and in this they were unfortunately too successful - for the primary loss of Allied bombers and crews was due to flak and not to German fighters.

Frank K6NL

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: midshires@cix.compulink.co.uk (Andrew Emmerson)
Subject: German WW2 Radar
Message-ID: <memo.511443@cix.compulink.co.uk>

>my understanding is that the Germans and Japanese had radar, of course, but it operated at comparatively much longer wavelengths (meters -vs- a couple of cm) and with far less power (none of the Axis powers actually got Magnetrons

>Perhaps you could give an example of a German radar system that was 'up to snuff' for the period and that was militarily useful (not being sarcastic -- just don't know).

Aaaargh!

The Germans (I can't speak about Japanese radar) frequently used higher frequencies than the Allies and achieved their ERP by antenna gain. They were shooting down Allied planes with 9cm radar, etc. etc. Honestly, this is not the place to go into a blow-by-blow debate but I will just quote from a richly illustrated article in the American _Radiocraft_ magazine for December 1945.

"It can now be told that at the start of the war between Germany and England, the Nazi scientists were months ahead of the British in radar development [the rest of the article is less laudatory]. In general their equipment had few technical advantages over British and German radar equipment... but the importance and effectiveness of Nazi radar against Allied forces should neither be ignore or minimized.... Practically all sets used for early warning purposes operated at frequencies between 120 and 130 megacycles ... peak power of around 20kW... the most accurate and efficient radar equipment ever designed by the Germans was the Wuerzburgg with its many types and variations. A small rotating dipole was situated at the focal point of an 10-foot parabolic reflector; the power output was about 10kW peak and operated on any of several frequencies between 550 and 590 megacycles. The so-called Giant Wuerzburg had a reflector nearly 25 ft in diameter and was used to detect shipping along certain parts of the English Channel."

There are several well-illustrated books on German radar and probably the most accessible is THE RADAR WAR by David Pritchard, with a foreword by Prof. R.V. Jones. Published 1989 by Patrick Stephens Ltd, 240 pages, many line and halftone illus. In German we have DIE RADAR SCHLACHT by Werner Niehaus (Motorbuch Verlag, 1977, 246 pages, halftones plus line drawings) and DIE DEUTSCHE FUNKMESSVERFAHREN BIS 1945 by Fritz Trenkle (Huethig Verlag, 1986, 212 pages, crammed with photos, drawings and maps -- this

is the collector's book, written in type-by-type order).

I could go on but I won't. Read these books and you'll be convinced.

Andy.

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Bill Sorsby <bill.sorsby@dlep1.itg.ti.com>
Subject: Re: HAMMAR SP210 CONVERSION??
Message-ID: <199701201543.JAA21805@lesol1.dseg.ti.com>

At 11:58 PM 1/19/97 -0700, you wrote:

>Hi Bill:
>Didn't notice that this was your set.

Hi Hank,

Understandable, since the first post on this subject came from Dee Almquist. I made the second post. Dee's receiver was apparently more extensively modified than mine, although most of the mods he described appear similar to the ones done to one of my SP-200's.

I agree with most of your comments, Hank. Many, or perhaps most, ham mods fail to optimize total system performance. But then, a similar thing can also be said about quite a few production products. ;-) For instance, from what I've read, the early Super-Pro's, HQ-120 and HX-129 had poorer front ends, relative to noise and signal handling, than the competition at the time, the SX-28 and HRO. Of course, there's no such thing as a perfect product. Products evolve. Every piece of electronics I've ever run across has its good points and its weak points.

My love for the old Super-Pro's goes back to my having used a BC-779B, almost exclusively, during the first five years or so of my hamming. For an LC filtered set, the selectivity is outstanding. The only old LC filtered receiver I know of with better selectivity is the R390.

I suppose the main reason I appreciate my extensively modified Super-Pro so much is that even as a kid I was abundantly aware of some of my BC-779B's limitations and considered doing some mods myself at one time but never got around to it. (My first priority was getting on SSB which I finally accomplished with a homebrew SSB transmitter.) My old extensively modified Super-Pro may not be worth much to anybody else, but to me it's a work of art and I truly admire the individual who created it.

Regards,
Bill Sorsby, N5BU

****
bill.sorsby@dlep1.itg.ti.com
Views expressed herein are no one's fault but mine.
****

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Bill Meara <wmeara@erols.com>
Subject: Heathkit in Space!(Crystal grinding)
Message-ID: <199701202326.SAA02134@mx03.erols.com>

Well not quite. But I plan to use it to work through the Russian satellite RS-10.
I'm talking about my long defunct Heath HW-30 aka "Benton Harbor Lunch Box" aka "Twoer."
At Frostfest I came across one of those little 35 watt, two meter amplifiers and bought it for no good reason (or so I thought!). This morning, while trying to think of a use for it, I remembered my dust-gathering Twoer... and my long-lingering desire to generate some CW on 2 meters so I could work through the Russian satellite. A plan was in the making.

First (remembering our recent discussion of the tactical dangers of regens) I disabled the receiver (Weak signal 2 meter users applaud!). Then I recapped the transmitter to take care of some hum. I found a crystal in the junk box in the 8 mc. range. Threw in some patch cords and sure enough, I was wiggling the ether with about 25 watts on in the 145 mc. band. The continuously running oscillator and driver were driving me nuts (and sending a watt or so to the antenna) so I went in and added the driver to the cathode keying circuit. Problem solved.

Now all I need is an FT243 crystal in the appropriate range.

I need crystals in the 8103 - 8106 kc range. I have 8120, 8230, 8220 and 8160. I was hoping that I'd be in range for some crystal grinding. Can someone give me some pointers? How much will I have to shave off? I remember some discussion on this a while back... Any suggestions will be much appreciated.

73 De N2CQR
Bill Meara
Hallicrafters, Heaths and Hammarlunds
QTH: Falls Church, Virginia, USA

Formerly of Tegucigalpa, Bilbao and Santo Domingo
wmeara@erols.com
http://www.mindspring.com/~johnmb/billm.htm

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: dma@IslandNet.com
Subject: Re: HELP with ancient tv
Message-ID: <1.5.4.32.19970120184454.006ea034@pop.IslandNet.com>

At 07:11 PM 1/19/97 -0600, you wrote:
>I have acquired an old tv. Here's the specs:
>
>Motorola Golden View
>green screen
>10/25/148 stamped on the back (assuming date of manuf)
>TS-9C stamped on back (assuming model #)
>12405 engraved on back (model #?)
>
>All tubes test ok
>All tubes lite
>
>Problems:

Lucky you! My experience with old (pre-solid state TVs) is that the weakest points were the flyback transformer and associated sweep circuitry, and the tuner. I assume by 'no video' you mean no raster, so the former is the place to start. For whatever reason the design of these old sets pushed the sweep circuitry way too hard with frequent and expensive failure being the norm. Serious component overheating should be looked for; open windings on the flyback; or (most hard to find) arcing paths over the "insulation" on the transformer. If the sweep circuitry seems to be working, turn the lights off and look for blue! We used to have a special tool for checking for the presence of HV on the flyback output - all it was as I recall was a neon bulb and a high value resistance mounted on a very carefully insulated rod. But my memory isn't what it once was!

Do you have a spot in the middle of the screen, or is it completely dark? If you have a spot, chances are you have HV but no sweep. No spot means one of the above problems, or a dud CRT. If you have HV and sweep, but nothing on the screen, look at the CRT circuitry. It's not really much different than you'd find in any 1940s-50s Handbook.

I didn't mention the CRT yoke. In my experience it rarely burned out, however, you should check it for continuity.

Just be really careful, there are a lot of surprisingly high voltages in

this area of the chassis! I got kicked more than a few times, but I was a kid! These old sets were sometimes awful to work on because they were so badly made. But yours is worth preserving, and should be of better construction than the ones I remember that were made a decade later. The circuitry is simple by today's standards and normal trouble-shooting will reveal all. After all, a lot the guys I worked with repairing these things had no training whatsoever other than having grown up repairing old radios.

Nothing else off the top, so good luck.

Sorry I can't offer more info on this precise model.

Jan Skirrow

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Joe Serocki <JSEROCKI@allstate.com>
Subject: Re: HELP with ancient tv -Reply
Message-ID: <s2e38129.087@allstate.com>

Thanks. I will try the HV probe idea.

Absolutely no picture, or dot, of any form. Looks like HV out to me. Not really comfy poking around back there, but I guess I can be careful

Any ideas where I can scare up a speaker for this, to at least check out the audio output.... And where to get a flyback of some form (use a current model flyback?) to replace this one, as it really looks like the only source of failure back there...???

Thanks one and all

>>> <dma@IslandNet.com> 01/20/97 12:44pm >>>
At 07:11 PM 1/19/97 -0600, you wrote:
>I have acquired an old tv. Here's the specs:
>
>Motorola Golden View
>green screen
>10/25/148 stamped on the back (assuming date of manuf)
>TS-9C stamped on back (assuming model #)
>12405 engraved on back (model #?)
>
>All tubes test ok
>All tubes lite
>
>Problems:

Lucky you! My experience with old (pre-solid state TVs) is that the weakest points were the flyback transformer and associated sweep circuitry, and the tuner. I assume by 'no video' you mean no raster, so the former is the place to start. For whatever reason the design of these old sets pushed the sweep circuitry way too hard with frequent and expensive failure being the norm.
Serious component overheating should be looked for; open windings on the flyback; or (most hard to find) arcing paths over the "insulation" on the transformer. If the sweep circuitry seems to be working, turn the lights off and look for blue! We used to have a special tool for checking for the presence of HV on the flyback output - all it was as I recall was a neon bulb and a high value resistance mounted on a very carefully insulated rod.
But my memory isn't what it once was!

Do you have a spot in the middle of the screen, or is it completely dark? If you have a spot, chances are you have HV but no sweep. No spot means one of the above problems, or a dud CRT. If you have HV and sweep, but nothing on the screen, look at the CRT circuitry. It's not really much different than you'd find in any 1940s-50s Handbook.

I didn't mention the CRT yoke. In my experience it rarely burned out, however, you should check it for continuity.

Just be really careful, there are a lot of surprisingly high voltages in this area of the chassis! I got kicked more than a few times, but I was a kid! These old sets were sometimes awful to work on because they were so badly made. But yours is worth preserving, and should be of better construction than the ones I remember that were made a decade later. The circuitry is simple by today's standards and normal trouble-shooting will reveal all. After all, a lot the guys I worked with repairing these things had no training whatsoever other than having grown up repairing old radios.

Nothing else off the top, so good luck.

Sorry I can't offer more info on this precise model.

Jan Skirrow

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: w2ec@VNET.IBM.COM
Subject: HRO 50Kc-100Kc coil, external crystal for filter/info wanted
Message-ID: <199701201513.JAA20051@uro.theporch.com>

I have received an HRO, my first, and I have some questions on it, as well as needing a few parts.

The ID tag on the front just says HRO, no suffix like HRO-M or HRO-5 etc, but the fellow I got it from believes it's an HRO-M. What do the different designations stand for? One person indicated -M stands for Military, but this is clearly not a military radio. Not a rack mount, completely self contained in black wrinkle finish cabinet. No indications of any prior military use at all. Looks more like it sat in someones den or living room for the last 60 years. Radio is in extremely good condition for its age. I'm basically looking for a brief history of the early HRO line. Any pointers?

This radio has the crystal filter and I've seen references to some filters having an internal crystal and others having an external crystal that plugs into the top of the filter assembly. The manual I have shows what I assume to be the internal version, since the filter assembly appears pretty solid with no crystal or socket on the top. My radio has a similar filter assembly, but there are two extra holes that appear to be a crystal socket, however there is no crystal installed. I'm guessing I have the filter unit with the external crystal, but no crystal is installed . Does anyone have an original crystal for an HRO? I'm told it should be a round can about 1" dia and 1-1/4" high. Is it a basic crystal cut for the if freq? The manual indicates a 456kc if but the parts list doesn't say anything about the crystal itself.

Also looking for a spare 50kc to 100kc coil for an early HRO.

73, Ray W2EC   w2ec@vnet.ibm.com

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: Michael Crestohl <mc@shore.net>
Subject: Importing BAs!
Message-ID: <199701201007.FAA26452@northshore.shore.net>

Hello Everyone:

I have had some experience in these matters.

First of all the important thing to mention at the border is whether or not this is a personal or commercial importation.

Also if the equipment is of U.S. manufacture there is no duty or tax. This information applies to importing stuff INTO the U.S.

Also on a personal importation you are allowed $200.00 tax/duty free if you are out of the country for less than 48 hours. Over 48 hours absence gives you $400.00 exemption.

Commercial importations are more formal and require paperwork and possible use of a customshouse brokerage firm. If an item is over a certain dollar value you may need a broker even for a personal importation. I am not sure what this amount it currently - I believe somewhere around $1000.00.

I purchased a radio receiver from William Ford in Smiths Falls Ontario last fall. I had them pack and ship it to me in the U.S. The shipping was about $35.00 (Canadian). Ron Ford made sure that the radio was very well packed and it arrived without damage. A few days later I received a bill from a customshouse broker for US$14.50 to prepare the required forms. These would not have been required had I brought the radio back in my car but because the merchandise was unaccompanied they were necessary. Had I driven to Smiths Falls (about 40 miles west of Ottawa) I would had to:

a: Pay gas (not cheap in Canada) and wear and tear on my car for about 500 miles....

b: Take a day off to do it.

c: Pay Canadian 7% GST (Goods and Services Tax) and Ontario Provincial Sales tax, (I believe 8%) I would have been able to get both these taxes refunded at the border when leaving Canada. I'm not sure if the Ontario sales tax would be refundable at te border but I could claim it back by mail.

Given the above I highly recommend having such equipment shipped to the U.S. whenever possible.

Cordially,

Michael Crestohl, W1RC (also VE2XZ)
mc@shore.net

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997

From: MEC <danmec@inet.uni-c.dk>
Subject: Re: Importing BAs!
Message-ID: <Pine.3.89.9701201248.A18533-0100000@inet.uni-c.dk>

I have shipped equipment to USA several times. I classify it as "gift"
with a nominal value " for customs only". Usually it goes straight through
customs clearance.

The is applied to stuff being shuipped to me. If the declared value is
low enough, the content is declared as old, used - gift- i pay no duty here
either.

73 Rag OZ8RO

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: w2ec@VNET.IBM.COM
Subject: Importing BAs!
Message-ID: <199701201355.HAA17897@uro.theporch.com>

>I purchased a radio receiver from William Ford in Smiths Falls Ontario
>last fall. I had them pack and ship it to me in the U.S. The shipping
>was about $35.00 (Canadian). Ron Ford made sure that the radio was very
>.....snip.....

>c: Pay Canadian 7% GST (Goods and Services Tax) and Ontario Provincial
>   Sales tax, (I believe 8%) I would have been able to get both these
>   taxes refunded at the border when leaving Canada. I'm not sure if the
>   Ontario sales tax would be refundable at te border but I could claim it
>   back by mail.

Made it back from Canada with my BA with no problem. I did have to pay the
7% GST and 8% PST at the store, but was able to get the 7% GST refunded in
cash at the border. New ruling is that the PST will be refunded only when
it exceeds $50 Canadian. Mine was less than that so I couldn't get the PST
refunded. No big concern for me though, because the deals I got on the BA's
more than offset the PST. As was stated, just said I purchased a radio
receiver for amateur radio use and the customs inspector just waved me on
thru with the usual "have a safe trip and stay warm".

>Given the above I highly recommend having such equipment shipped to the
>U.S. whenever possible.

This may be true, but I'm far happier that I went! I went to Ford's and the
chance to browse thru the warehouse more than justifies the trip. The list
on the web is a small fraction of what is really there. And the prices,
when you consider the exchange rate, are just great. For example, I picked
up a URM-25D off the shelf for $50 Canadian/$35 US. Got a bunch of NOS in box

6C^'s and 6D6's as spares for my HRO for a couple bucks each. Wish I had taken lot's more money, found lots of thing's I'd like to have. I'll be making the trip again, but when it's a little warmer!

By the way, my new BA receiver exceeds my expectations. It is an RBA-1 (vlf 16kc-600kc) that I need to complete the RBA/RBB/RBC collection we're working on for a naval ship's restoration. The RBA is in such outstanding shape, both externally and internally, that no restoration will be needed. This unit will be able to go on display as-is.

73, Ray W2EC w2ec@vnet.ibm.com

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: jproc@bellglobal.com
Subject: Re: Invention That Changed The World
Message-ID: <Chameleon.4.01.2.970119231111.jproc@>

>Very soon, many books will be published on what REALLY happened during
>those WW-II years.

Richard,

What a fabulous post and thank you for helping to clarify and expand my limited knowldege of the crypto world.

Regards,

Jerry Proc VE3FAB
E-mail: jproc@bellglobal.com
Radio Restoration Volunteer
HMCS Haida Naval Museum
Toronto, Ontario

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: paul Veltman <veltman@netcom.com>
Subject: Re: Invention That Changed The World
Message-ID: <Pine.3.89.9701201226.A15918-0100000@netcom16>

Rag,
It may have been a working radar, but was it widely deployed for tactical use?

Paul WA6OKQ

On Sun, 19 Jan 1997, MEC wrote:

> It sounds like nobody on the other side of the pond realize that the
> Germans had a working radar before they to war.
> Some of the aerial sites can still be seen on the west coast of my
> native Norway.
> The Norwegian Armed Forces Museum in Oslo has a more or less complete
> Wurzburg radar. (*unfortunately not on display).
>
> I have some of the German radar tubes. They are ^different^ hi
>
> 73 Rag   OZ8RO
>

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: Re: Invention That Changed The World
Message-ID: <19970121002301.AAE16177@LOCALNAME>

At 08:25 PM 1/20/97 +0000, you wrote:
>Rag,
>It may have been a working radar, but was it widely deployed for tactical
>use?
>
>Paul WA6OKQ
>
>On Sun, 19 Jan 1997, MEC wrote:
>
>> It sounds like nobody on the other side of the pond realize that the
>> Germans had a working radar before they to war.
>> Some of the aerial sites can still be seen on the west coast of my
>> native Norway.
>> The Norwegian Armed Forces Museum in Oslo has a more or less complete
>> Wurzburg radar. (*unfortunately not on display).
>>
>> I have some of the German radar tubes. They are ^different^ hi
>>
>> 73 Rag   OZ8RO
>>
>   We're back to the "Freya" and "Wurzburg" radars again. Read "The
Bruneval Raid" by Millar for a really interesting account of how the Brits
figured out they weren't "first"! The Wurzburg stolen at the "Bruneval
Raid" contained a T/R device that was apparently new to the British. I
think a parallel could be drawn in jet engine development. The Axial flow

jet engine was a product of German Technology. The Whittle engine was different. The famous F-80 "Shooting Star" jet and the T-33A trainer two seat version used a variant of the Whittle design. An example of two different factions working on the same thing and coming up with different results.
The BIG British breakthrough was the "Cavity Magnetron".
73,
E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, repaired, traded and used!"
417 Ridgewood Drive,
Metairie, LA., 70001
ebjr@worldnet.att.net
Looking for: Hallicrafters SR-75, 860 tubes
Butternut HV2V antenna, G-R test gear.....*

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: "Walter Fairclough" <wfairclo@netcom.ca>
Subject: Items Wanted
Message-ID: <199701201330.IAA23388@tor-srs1.netcom.ca>

Trying to restore Hallicrafters SX-71 and SX-43 receivers. Need the following items:

SX-71 - Need cabinet, Reception, Main and Bandspread tuning knobs.

SX-43 - Need S meter, Selectivity knob, Main dial cover, Bandspread dial and cover, 500 ohms 1 watt S meter control pot Hallicrafters Part # 251569 or IRC Part # W-500 or Clarostat Part # 43-500, and a power transformer Hallicrafters Part # 52C143 or Stancor Part # P-6313 or Merit Part # P-2953.

I will consider junkers if they contain the above items.

Thanks for reading.

Walter

Walter Fairclough
Manotick, Ontario
wfairclo@netcom.ca

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: "Pentti Haka" <pha@mikrolog.fi>
Subject: Measurements & floating ground
Message-ID: <MAILQUEUE-101.970120210202.384@osku.mikrolog.fi>

Henry van Cleef wrote:
>One of the reasons for having a Simpson 260 or equal is that it is
>completely isolated from mains power. The Simpson (and any other good
>multimeter) has good case insulation, and both the positive and
>negative leads are well-insulated from the case or anything you can
>contact. You want to watch out for test prod insulation. Most of it
>claims to be good to 600 volts. However, handle one test prod at a
>time if you are talking more than 100 volts or so away from earth
>ground.

If one does not insist on using BA type T&M gear when servicing BA rigs, the TEK THS-710/720 portable scope is an ideal instrument for making measurements (scope & DVM) safely in tube equipment where high voltages are present. Both scope channels, the DVM channel and the power supply inlet are fully isolated from each other. Unless one forgot to charge the battery, it can be operated truly floating without an external supply. Being almost instantly available and easily moved around, I often use this portable scope instead of firing up the big clunker.

A problem of course is the high cost of these gadgets, so if you cannot borrow one from where you work, an analog VOM with well insulated case & probes is the safe way to go; an AVO could perhaps be considered as an European equivalent of the Simpson?. Unfortunately a fully isolated BA oscilloscope does not exist, as far as I know.

My vote in the "scope or VOM first" poll: VOM first, then scope if required.

"Not affiliated with TEK in any way, just a happy user"

73, Pentti

------- Pentti Haka ---------
---------- OH2TC ------------
-- Pentti.Haka@Mikrolog.fi --

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: don merz <71333.144@CompuServe.COM>
Subject: More on RCA "Losses"
Message-ID: <970120150109_71333.144_DHB38-19@CompuServe.COM>

Two others that RCA lost: Against Cunningham, over basic tube patents, and against Gilfillian over boradcast receiver patents.
Both companies ended up as distributors for RCA and held substantial pieces of the pie during the 20's and 30's.

73, Don

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Mike Toneri <toneri@ils.net>
Subject: Re: my Viking Valiant problems
Message-ID: <199701201754.MAA03641@server1.ils.net>

Now I am really fed up with that darn Valiant II. Last night the 6BY5 bias rectifier tube decided it would like to short one of its cathodes to the filament. Wouldn't you know it , I don't have a spare tube! Just when I thought I was getting close to the solution. Guess I will have to take a trip to Toronto and see if my favourite tube supplier has a couple of those bottles in stock. I sure will be happy to get that rig back on the air where it belongs.
Still looking for a reduction drive for the Johnson Ranger/Valiant VFO.
73...Mike VE3FGU

****
Mike & Lynda Toneri   E-mail: toneri@ils.net
****

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: mashaum@fcg.net (Mark Shaum)
Subject: Needed Stuff for Winter Projects
Message-ID: <M.012097.130623.63@NE9G>

I need a few odds and ends to help complete (some) of my indoor winter projects. I won't even mention the outdoor (antenna) winter projects..(!)

Ameco TX62 parts rig. I have a cosmetically excellent one that caught fire underchasis. Never know it from the outside or topside, which at least explains the low asking price at the hamfest. There are enough underchassis parts I need (piston trimmer, switch wafer, misc power resistors) to make procuring a second unit for parts necessary. Help me revive 6 meter AM activity in central Illinois along with WC9M and WQ9E..(You guys are drafted!)

10 volt 10 amp c.t. fil. xfmr for my 813's. My original finally opened up (hermetically sealed, unfortunately. I'll uncan it but doubt if it will be feasable to rewind if potted)

Dakaware knob with 1 3/4 inch skirt (same as volume control et al. on 75A and 32V series rigs) to complete the outside of my now on-the-air 310B-3. I've asked about this one before, and have been managed to collect just about every possible Dakaware size between 1 and 2 inch skirt diameter in 1/8 inch increments except 1 3/4!

Mark Shaum, K9TR
mashaum@fcg.net

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: eb5agv@ctv.es
Subject: R-390A Cosmos PTO linearization
Message-ID: <1.5.4.16.19970120075541.26ffe542@192.168.0.1>

Hi BA Gang!

Well, I'm working with my recently acquired EAC 67' R-390A. I'm doing the Lee's SSB mod (more on this later; I'll report to the list my experiences and a 'new' approach to the audio switching...) and I want to make the linearization of the PTO... I got zero beat at (-)000 and (+)004.4 and in intermediate points, an always increasing value from the corredct one, but not linearly distributed. So I wonder which I should do now. As I'm new to that PTO matter, any hint could be of great help!

THANKS!

Best regards.

---
  73 JOSE V. GAVILA (EB5AGV / EC5AAU)
      46910 Benetusser - Valencia
      SPAIN

 QTH locator: IM99TK

*** PLEASE, VISIT MY HOME PAGE AT : ***
http : //www.geocities.com/SiliconValley/6992
e-mail: eb5agv@ctv.es & eb5agv@amsat.org

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: bdhall@ghg.net (Benjamin D. Hall)
Subject: R-390A Noise Limiters
Message-ID: <32E3F4D5.4918@GHG.net>

Hiya folks...

Just got back from fellow esteemed listmember Gerald D'Entremont's house up in Spring Texas. Phil Mills and myself made the trek to "christen" Gerald's recently arrived Rick Mish-overhualed R-390A (Motorola '58 contract I think). Basically, she is a gorgeous looking radio, painted a nice gloss black that you can comb your hair in. Inside, she is "eat off of" clean, and works extremely well. Very, very sensitive and highly selective. However, after playing with it, Phil and I noticed that the Noise Limiter didn't do much at all.

Phil commented that the Noise Limiter in his R-390A (Imperial Electronics, basically a depot queen with mized modules) doesn't do much until you get the knob to about 10, then it cuts all the signal. Now, on my depot queen 14-PH-56 Motorola and my pride and joy EAC R-725, the Noise Limiter works great. In fact, I just crack it on a little bit and I cut out most of the noise but I am still left with great signal.

Now, I would expect that a Rick Mish R-390A would work perfectly, so I'm left with the question of just *how* are R-390A Noise Limiters supposed to work? Is Phil's and Gerald's Mish R-390A working properly and my R-390A modified maybe? Is the original design bad? Does my apartment on my cheesy 15' antenna generate more noise the noise limiter can eliminate than Phil and Gerald's real antennas?

R-390A experts, y'all have any words on this?

Thanks and 73,
Ben
--
From the computer of | Collector of fine firebottle
Benjamin D. Hall, Houston Texas | equipment, as well as other things
BDHall@GHG.net (home) -or- | involving Earth, Air, Water, and
Benjamin.D.Hall1@JSC.NASA.gov | Fire.

PLEASE NOTE MY NEW HOME E-MAIL ADDRESS above. My old address,
BDHALL@GHGCorp.com, will still work for a period of time however.

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: "Grant Youngman" <nq5t@gte.net>
Subject: Re: R-390A Noise Limiters
Message-ID: <199701202319.RAA27612@smtp.gte.net>

> so I'm
> left with the question of just *how* are R-390A Noise Limiters supposed
> to work? Is Phil's and Gerald's Mish R-390A working properly and my
> R-390A modified maybe? Is the original design bad?

I think the original design is fine, and that the problem lies in
the specific radios... mine (EAC) is very effective, with just a
slight cracking open of the NL control required in most
dircumstances.

Grant/NQ5T
Grant Youngman -- NQ5T
nq5t@gte.net
HTTP://home1.gte.net/nq5t/index.htm
Double Oak, TX (near Dallas)

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Morris Odell <morriso@vifp.monash.edu.au>
Subject: Re: R-390A Noise Limiters
Message-ID: <32E41781.23A3@vifp.monash.edu.au>

Hi Ben,

> However, after playing with it, Phil and I noticed
> that the Noise Limiter didn't do much at all.
>
> left with the question of just *how* are R-390A Noise Limiters supposed
> to work? Is Phil's and Gerald's Mish R-390A working properly and my
> R-390A modified maybe?

The noise limiter in the '390A uses diode connected triodes to produce a
noise clipping type of limiter. It chops the top off noise spikes (and
signal peaks too, depending on the setting of the control). It's mode of
operation is well documented in the '390A manual. These type of limiters
were known as "automatic noise limiters " (ANL) circuits because they
adjusted themselves to suit varying signal strengths. In order to do
this in the '390A the limiter requires an input consisting of the audio

signal plus a dc level proportional to received signal strength. This is ideally suited to the diode detector in the receiver receiveing AM and one of the reasons why it does not work well with any modification that replaces the detector as many ssb mods do. In fact on ssb or CW using the diode detector the ANL action is probably not too good either as the only constant signal contributing to the diode detector dc output is the BFO.

I have a product detector mod in my '390A that attempts to get around this by impressing a constant negative voltage on the audio output. It's better than nothing but still quite suboptimal and I find I don't use the ANL very often even though I'm in a very noisy environment. I'm going to start experimenting with antenna noise cancellation real soon now.

I suspect the ANLs in the various receivers you have heard performed differently because of the different signal conditions at the time. To compare them properly you have to apply the same signal to them. Using the diode detector in the '390A I have found wide variations in ANL effectiveness depending on what I am listening to.

For the time the set was designed in the 1950s the ANL was reasonable technology. IF noise blankers for impulse noise existed but were expensive to implement with tubes. Other forms of noise cancellation were probably too difficult or exensive at the time. The narrow band filters also went a long way to help in noisy environments - after all, the wider you open the window the more dirt flies in.

73
Morris VK3DOC

Morris Odell Victorian Institute of Forensic Medicine
Forensic Physician 57-83 Kavanagh St, Southbank 3006
morriso@vifp.monash.edu.au Victoria,
Australia

Web page: http://www.vifp.monash.edu.au/CFM/staff/mo.html

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: "Lon W. Cottingham" <k5jv@swweb.net>
Subject: R-390A/R-725 aduio module repair
Message-ID: <32E40A75.6CE2@swweb.net>

Greetings to All,

With all the discussion about R-390A/R-725 audio lately, I thought I would mention a situation that has caused me some concern over the years. Realizing that we all do not have access to the full schematic of these wonderful old receivers and, even if we do, sometimes we simply miss the very obvious, I offer the following paragraph.

The filter capacitors in the R-390A/R-725 receivers are mounted on the audio sub chassis. Two electrolytic units, C603 and C-606, mount side-by-side, are exact look-a-likes, and will plug into each other's octal socket. C-603 is made up of three 30 Mfd units and C-606 consists of two 45 Mfd caps. Because they look exactly the same it is very easy to mix them up whey removing them for testing/cleaning. Age has taken its toll on the lettering stamped on some of these capacitors making it difficult, if not impossible, to read their values. I suggest marking both caps with lead pencil before removing them from their sockets. The pencil lead will easily wipe off without leaving a trace when the job is finished.

73 de Lon, K5JV

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: "Roberta J. Barmore" <rbarmore@indy.net>
Subject: RADAR
Message-ID: <Pine.SUN.3.91.970120154109.27965A@indy1>

Hi!

I've been following this thread with interest--one of the first "neat books" encountered in the HS library was a paperback history of WW II and prior RADAR work in the US.

The simple answer to "who invented RADAR?" is "Everybody!" It was inevitable once the Short-Vave craze started: about as soon as folks realized that short waves *had* to be bouncing off *something* to cover great distances (a tip of the hat to Kennelley (sic) and Heaviside), they were going to wonder what else one could bounce radio waves from, and to what use it might be put...and from there, it's pretty simple physics to figure out that you get the best reflections from things much bigger than a wavelength in size, so the shorter the wave, the more you can look at. It holds true no matter what language one happens to be thinking in.

US researchers were bouncing stuff off things as early as the 1920s, with the darndest breadboard setups you ever saw, and were probably not the only ones; but calling that "RADAR" is a bit of a stretch. The art was *not* developed in a Watson-come-here-I-need-you stroke of wonderment.

There are a *lot* of technologies (oscillographic display, selsyns, antenna design, *and* UHF techniques to scratch the surface) in the thing we picture when we hear "RADAR."

The British deserve a great deal of credit for coming up with the War's best & simplest way to get centimeter waves, and for that they deserve a lion's share of the thanks for "inventing" RADAR. During the War, there seems to have been a bit of friction between US & UK boffinage on that topic...but it's been fifty years and there's no denying the direction in which the cavity magnetron was snuck. The Brits also seem to have put RADAR to productive use earlier than anybody else--of course, daily bomb raids *are* a stimulus to such development! So we might as well stencil a Union Jack on our RADARs, make a footnote that it was "radar time" worldwide, and get on with other things. :)

Or do I have to shred up a heap of Reynolds Wrap, and start tossing it out to quiet things down? (Whether the resuling tinsel is "chaff" or "window" depends on whether you're speaking English or English....)

73,
--Bobbi

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Miro Klima <mattj@orausa.com>
Subject: RADAR Manual
Message-ID: <01BC06D8.2987CEC0@mattj.orausa.com>

Gang,

With all of the talk about RADARs it is opportune
that I offer a trade/free original copy of the
following manual to Boatanchorites:
RADAR IDENTIFICATION SET AN/APX-6
dated 1 June 1959 Manual Service Instructions
T.O. 12P4-2APX6-2 (for those who know, which
is certainly not me!!).

If anybody can use this manual please e-mail
me as I would like to see it with somebody who
can use or at least appreciate it. Tons of schematics
so who knows, you may wish to build your own!!

73 de Matt WB2VZS

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997

From: Miro Klima <mattj@orausa.com>
Subject: RADAR Manual
Message-ID: <01BC06DD.AF8688E0@mattj.orausa.com>

It's gone to a good home.
Thanks guys/gals.

     73 de Matt WB2VZS

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Richard Pekelney <pekelney@rspeng.com>
Subject: Re: Radar References
Message-ID: <v03007801af099a2584fc@[140.174.167.23]>

Folks,

My favorite book on the development of radar is:

Price, Alfred (1978) Instruments of Darkness; The History of Electronic
Warfare. New York, NY: Charles Scribner's Sons. 0-684-15806-X

This book follows all the inovations in radar and radar counter measures
during WW II and a little beyond.

Does anyone have any suggested references on SONAR?

rich

--
Richard Pekelney
Internet: pekelney@rspeng.com
Phone: 1-415-563-5928
Fax: 1-415-563-5787

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Karan Lee Carruth <klccarru@tenet.edu>
Subject: Re: Radar References
Message-ID: <Pine.OSF.3.91.970120164228.18191A-100000@francis.tenet.edu>

Best book I have read on radar is the two-volume set:

      Guerlac, Henry E., Radar in World War II, American Institute of

Physics, 1987.

Last time I checked, the AIP had these on sale for half price (about $50.00). Original price was $90 if I remember correctly.

It is a reprint of a 1946 report on the history of Division 14, Radar, of the National Defense Research Committee from its origin in July 1940 until June 1946. However, the "Early History" section records the early development of radar. This section alone is 240 pages. Total for the two volumes is 1170 pages. Very interesting reading. Mostly about developments at the MIT Radlab. Wish I could find a similar book about the "other side" of the radar story at Bell Laboratories.

Unfortunately, I do not have the address of the AIP but I am sure it would not be hard to find. (couldn't be too hard, I found it once!) I believe they are in New York City.

Lenox Carruth, WA5OVG

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Paul Bernhardt <bern@ppdu.nrl.navy.mil>
Subject: Re: Radar References
Message-ID: <Pine.A32.3.91.970120183914.20304A-100000@ppdu.nrl.navy.mil>

The address for AIP is:
American Institute of Physics
500 Sunnyside Blvd.
Woodbury, NY 11797-2999

Try calling the American Physical Society at 301-209-3200 for more information.

Paul Bernhardt, KF4FOR

On Mon, 20 Jan 1997, Karan Lee Carruth wrote:

>
> Best book I have read on radar is the two-volume set:
>
> Guerlac, Henry E., Radar in World War II, American Institute of
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> would not be hard to find. (couldn't be too hard, I found it once!) I
> believe they are in New York City.
>
> Lenox Carruth, WA5OVG
>

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: William Donzelli <william@ans.net>
Subject: Radar talk...
Message-ID: <199701201547.AA14200@interlock.ans.net>

.is great, but how about a picture! Look at...

http://chide.bournemouth.ac.uk/museum/
  hms.collingwood.annex/type271.radar.html

William Donzelli
william@ans.net

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Dan Kerl <dlkerl@ro.com>
Subject: Re: Radiation
Message-ID: <32E3CA1F.4076@ro.com>

> In a message dated 97-01-18 18:18:00 EST, anthonys@ix.netcom.com (-=Tony=-)
> writes:
>
> << Walter, this is very true but the biggest offender was the 6B4G
> (number from recall) shunt regulator which emitted several times >>

This is actually the 6BK4. 27KV plate rating, 40W, 1.5mA
The -C version was rated at 1.5mR/hr.
-from GE Essensial Characteristics
                        Dan Kerl
                        dlkerl@ro.com

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: Richard Hager <rhager@millcomm.com>
Subject: Re: RADIATION, CAUSES WILD GROWTH
Message-ID: <32E30A87.2998@millcomm.com>

Ummmm.....guys and gals?

Can we let this radiation thing go?

The thing I like best about this group is that we all feel pretty comfortable with each other, and it's easy to strike up a conversation here. That's great, but sometimes it leads us to take one little message and balloon it up into a big long thread that just doesn't belong here.

I don't think any of us does it on purpose, we just aren't -thinking- about what we're doing a lot of the time. We see a funny message and want to join in. The trouble is that 600 of us do so. That takes a little funny friendly thing, and turns it into a huge problem.

I've been as guilty as anyone else on other threads. Like I said, it's not 'cause we're evil people or anything. Just the opposite. I think it's a natural result of our friendliness and desire to communicate with each other.

But it's been getting a lot worse lately. When you hit 'reply' and start typing, just stop for a second -each time-, and ask yourself if you shouldn't really oughta just let that one go by. Know what I mean?

All that needed to be said on radiation =as related to BA's= was: "Markings on BA dials can be radioactive. Don't eat it". The rest of it is pure clutter that's burying the good stuff here.

With 600+ of us in the group now, each of these off-topic threads grows wildly fast. That means that each of us has to be just a little more careful. That'll be enough to get things back like they should be. BA's and just BA's.

I think we'll all benefit from being a little more self-disciplined about this. Maybe if we all just try to make it a new -habit-, a habit of thinking before clicking 'send', that would be enough to make a huge difference here.

There's no need to respond to this on the list. Let's just all give it a little thought next week as we post, and see if we can do better.

Thanks a bunch!

Richard Hager

+ Ah-ha! Design Group, Inc.   -
+ Precision CNC Technology, since 1991 -
+ 612-641-1797, Fax: 612-641-8681   -
+ "I just like to make things" So...   -
+ ...please call Ah-ha! directly for CNC info   -
+ http://www.millcomm.com/~ahha email: ahha@millcomm.com -

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Tom Clarke <fclarke@erols.com>
Subject: Re: RBC
Message-ID: <32E41E21.398@erols.com>

> The P3C HF radio was built by RCA. We still maintain depot repair status
> for that radio (1 KW output, HF, single ATR i believe, no solid state
> amp can touch it for watts/cubic foot).
>
> Mike
> kc2kjIn it's present form (ARC-161) it is a good performer. The original radiio had an annoying habit of smoking up the cabin of the P-3!!
Actually it was the antenna coupler that "smoked". The original tuner when operating at the 1KW level would "nuke" some of the switches in the coupler. They were mechanical contrivances that used open switchbars that were insulated with micarta. The fix was to replace them with vacuum relays. The Navy initially disabled the Hi (1 KW) position until the new radios were installed.

Tom Clarke
W4OKW

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: jproc@bellglobal.com
Subject: Re: RCA RBC-5
Message-ID: <Chameleon.4.01.2.970120124253.jproc@>

>
>> so, semi-facetiously i ask, was the receiver radiation bizness a scam to
>> justify Scott & Technical Radio Corp. selling grossly overpriced, overbuilt
>> radio equipment to uncle sam?

Wait a minute! Receiver radiation becomes can become serious issue when there are a number of them operating side by side. Deluxe shielding of a receiver

is an expensive proposition. If Uncle Sam was paying more dollars to address the issue of mutual interference, that's fair game. Yes or no?

Regards,

Jerry Proc VE3FAB
E-mail: jproc@bellglobal.com
HMCS Haida Naval Museum
Toronto, Ontario
'Looking for a 'AN/SRC-501'

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: w2ec@VNET.IBM.COM
Subject: RE: RCA RBC-5
Message-ID: <199701201833.MAA26135@uro.theporch.com>

It's easy for those of use here, 50 years after the fact, to say that shielding of receivers isn't really that necessary because it's highly unlikely to bring a wolf pack down on you. But, given the collected knowledge of that time, it was known that you could detect radiation from a receiver. What with the U-boat terror of the Great War (WW-I) and the millions of tonnage being sunk in '39 and 40', don't you think it might have been prudent to try and shield as much as possible? Overkill by todays standards and knowledge, maybe yes. But better overkill then sitting on the bottom of the ocean floor.

73, Ray W2EC

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: berg stephen erik <z931086@corn.cso.niu.edu>
Subject: RE: RCA RBC-5
Message-ID: <Pine.3.89.9701201809.A24216-0100000@corn.cso.niu.edu>

back when I was associated with the military-industrial complex, I read a book about electronic warfare during the Second World War. I cannot recall the title right now. (creeping senility) There was concern about technological innovation on both sides of the conflict. We were worried about receiver radiation. The Germans were concerned that their u-boats were suddenly sitting ducks. Their radar warning receivers did not cover the new X-band airborne radars used for finding subs. The Germans thought that we were using some unknown technology, and decided that it was some sort of infrared detector. They then did a crash program to counter this new threat. They developed some pretty good IR countermeasures, but this

obviously did not help much against X-band radar.

my $0.02 worth.

Steve WA9JML

z931086@corn.cso.niu.edu

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: sinned@VNET.IBM.COM
Subject: RF field strength measurements
Message-ID: <199701201815.MAA25411@uro.theporch.com>

Last weekend measurements were taken at the QTH's of W5FRS and N5BU
with a wide band field strength meter, calibrated in Volts-per-Meter.
The results are very similar to those published in the 1994 ARRL Hand-
book, pg 36-5.

Antennas used were wire dipoles and inverted V's at height's from 30
to 45 ft. The strongest field measured was 75 V/M with 100W output.
Most readings were much lower, in the 2 to 10 V/M range, even at
power outputs from 170 to 400W on 80, 40, and 15 meter frequecny
bands. Transmission mode was continuous unmodulated carrier, ie.
key held down and finals glowing.

CONCLUSION: We don't have much to worry about on the 3-30MHZ bands.
The allowable limit for the stricter "uncontrolled environment" is
much greater that the field strengths actually produced. Only a
maximum legal limit transmitter would probably be able to produce
fields approaching the published maximum safe values.

BTW: To save space/time I have not included the actual values here.
If anyone wants the detailed info, let me know privately and I'll
e-mail it to you.

Dennis W5FRS
sinned@vnet.ibm.com

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: jkh@lexis-nexis.com (John Heck)
Subject: Rocket Tester?
Message-ID: <9701201517.AA09061@beans.lexis-nexis.com>

Folks,
I've got an interesting little piece of hand held gear called a "Rocket Continuity and Circuit Tester", Type A-1. Battery operated, no leads. Does anybody know what this is and does anybody want it?
Regards,
John Heck, KC8ETS
1009 Donson Drive
Dayton, Ohio 45429
(513)865-7036(work)
jkh@lexis-nexis.com

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Dave Creek <dcreek@pixi.com>
Subject: Re: Rocket Tester?
Message-ID: <Pine.PCW.3.95.970120062624.7631A-100000@neogodzilla09.pixi.com>

On Mon, 20 Jan 1997, John Heck wrote:

> Folks,
> I've got an interesting little piece of hand held gear called a "Rocket Continuity
> and Circuit Tester", Type A-1. Battery operated, no leads. Does anybody know what
> this is and does anybody want it?
> Regards,
> John Heck, KC8ETS
> 1009 Donson Drive
> Dayton, Ohio 45429
> (513)865-7036(work)
> jkh@lexis-nexis.com

This is a current limited ohmmeter used to test the squib-igniters on rockets used by the military on aircraft. The civilian equivelent is called a blasting galvanometer and is used to test electrical blasting caps.

73 es Aloha,

Dave Creek, NH6BA
Ewa Beach, HI
dcreek@pixi.com

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997

From: Mike Toneri <toneri@ils.net>
Subject: Re: Rocket Tester?
Message-ID: <199701201754.MAA03644@server1.ils.net>

At 09:21 AM 1/20/97 -0600, John Heck wrote:
>Folks,
>I've got an interesting little piece of hand held gear called a "Rocket Continuity
>and Circuit Tester", Type A-1. Battery operated, no leads. Does anybody know what
>this is and does anybody want it?
>Regards,
>John Heck, KC8ETS
I think I know what it is John. It is used to check for continuity through the little electrical igniters that are used to launch model rockets. I used to fly those things years ago and remember a number of the boys used them to make sure the alligator clips were on tight before pushing the launch button. They were made by Estes and a couple of other companies.
..Mike VE3FGU

****
Mike & Lynda Toneri E-mail: toneri@ils.net
****

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: Michael Crestohl <mc@shore.net>
Subject: Scopes - never used one!
Message-ID: <199701201013.FAA26890@northshore.shore.net>

Hello Everyone:

In the thirty-odd years I've been playing with this junk I've never used an oscilloscope for troubleshooting.

My favorite and most-used piece of equipment is my trusty old Simpson 270 VOM in the neat roll-top case. Second in line is the URM-25D signal generator.

I am not an electronics technician and learned just about everything I know about radio by trial-and-error.

When I was first into it I did nothave access to a scope. I do have a Heath monitor scope (HO-10) and the Ham Scan (HO-13) panadapter but these are not really scopes per se. Last year I bought a Tektronix scope at a flea market but it sat around and did nothing because I did not know how to use it.

I would like to pick up a basic scope one of these days but unfortunately know very little about them to know what to get to do the job I need done. Since I've lasted 30+ years without using one it is not really a top priority.

73,

Michael Crestohl, W1RC
mc@shore.net

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: don merz <71333.144@CompuServe.COM>
Subject: SCR-281 Manual Needed
Message-ID: <970120211712_71333.144_DHB80-10@CompuServe.COM>

Well, in the absence of any replies on the subject (harumphhhh!), I had to do my own digging and found out that the BC-441-D is part of SCR-281. It was used on harbor and coastal vessels during WWII. Puts out a whopping 25 watts AM from a bunch of 6L6's and 807's. It is a hallicrafters design that looks like a scaled-down BC-669. It even has that weird loading coil with the adjustable taps like on the '669.

Anyway, does anyone have an SCR-281 manual laying around that I can copy. This thing covers the old HF marine band down to 1700kc -- 160 meters with no mods! So I'd liek to get it going. Any help appreciated.

73, Don

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Ho4bart@aol.com
Subject: so what were the actual proximity fuze tube ##s?
Message-ID: <970120133010_240564366@emout12.mail.aol.com>

i've seen articles and schematics on the VT fuze, and photos of the submini tubes, but what were the actual tube numbers? there should be alot of these still around, yes?   hue miller

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: BOB/WB0AUQ <brainbol@idir.net>
Subject: SX101/SX101-A Freq Coverage
Message-ID: <32E30DB9.55CA@idir.net>

Until yesterday I thought all SX101 models covered 160 thru 10 meters
and the -A model dropped 160 in favor of 6 and 2. At hamfest yesterday
was a plain SX101 with no 160 meters. The owner advised it was all
original and he had seen another just like it. I did not want to
move the Swan sitting on top of the Halli to see if there which MKxx
was on the chassis. Did they incorporate some frequency coverage
changes in the plain 101 before marketing the -A model?

73, Bob   brainbol@idir.net

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: "Roger A. McCarty" <rmccarty@deltanet.com>
Subject: Re: SX101/SX101-A Freq Coverage
Message-ID: <32E321F3.1452@deltanet.com>

BOB/WB0AUQ wrote:

> was a plain SX101 with no 160 meters. The owner advised it was all
> original

Bob,

On My SX101 Mk3A, it looks like from all outward appearances a "plain
Vanilla" SX101. Both the Front panel decorative label and the rear panel
Identification paper label both identify it as a "SX101". Not until you
open the lid do you see a Black Ink Stamp identifying it as a "MK3 A",
which covers 80 - 10 meters plus the converter band.

Apparently, Hallicrafters modus operandi was to be rather cryptic with
the identification of the "new and Improved" models. I have an SX99 Mk1A
that is similarly marked on the chassis and devoid of all outward signs
of a model change. The only difference in this case is the Mk1A used a
metal dial with lighting from above, as opposed to a plastic back lit
dial on the plain vanilla models.

See them at http://www.geocities.com/~kd6cc

Roger KD6CC

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: EdKB2NSP@aol.com
Subject: Re: SX101/SX101-A Freq Coverage
Message-ID: <970120025406_39234715@emout12.mail.aol.com>

Greetings !
    I've got an SX-101 Mk III and coverage from 160 thru 10 meters .

Ed K.

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Jim Lockwood <jml@innercite.com>
Subject: Re: SX101/SX101-A Freq Coverage
Message-ID: <3.0.32.19970120120601.0068673c@innercite.com>

At 12:19 AM 1/20/97 -0600, you wrote:
>Until yesterday I thought all SX101 models covered 160 thru 10 meters
>and the -A model dropped 160 in favor of 6 and 2. At hamfest yesterday
>was a plain SX101 with no 160 meters.

It's my belief that the Mk IIIa is essentially an SX-101A without the product detector. I also believe that this was a very short lived product for hallicrafters and that makes this particular model one of the more rare SX-101 variations. In any event it's a pretty neat radio.

73,

Jim - km6nk

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Rich Arland <qrprich@postoffice.worldnet.att.net>
Subject: TSC (or TCS) TX/RX BA
Message-ID: <19970120234038.AAA18650@LOCALNAME>

Gang:

My GM at WNAK is an ex: W3 and he has this HUGE transmitter/receiver called a TCS or possibly a TSC that he wants to give me. It has an AC supply built up for it. I have not seen it but he is going to get it out of his attic and present it to me in a week or two.

What the HELL am I getting into?

Anybody got any info on this old warhorse?

73 rich K7SZ

(VK0IR with the SX-117/HT-44 and 25 watts SSB!)

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: Richard Post <POST@ouvaxa.cats.ohiou.edu>
Subject: Two-tube regen schematic on web
Message-ID: <A4806ZWRDQWYXM*/R=OUVAXA/R=A1/U=POST/@MHS>

With all of the comments on submarines listening to early ship regen receivers, some may be interested in building their own to see the effect of isolating the antenna with an untuned RF amp versus a more direct connection.

Try the "Bloopless" One-Dial Two-tube receiver. The "Bloopless" moniker was to set it apart from one tube regen sets that caused interference to other nearby sets. A copy of the receiver was made by a member of the Museum of Radio and Technology (not me) who also created a display of the blueprints published and offered free by Radio News in 1929.

I scanned the simple schematic and will scan the coil details and add it to the page if anyone is interested. No bakelite coil form? A piece of PVC pipe should work. No 01A tubes? Try some of those orphan 3 and 4 volt filament tubes from a TV tuner or IF, wired up as triodes. The rest of the parts are relatively easy to come by or substitute. Build it and let us know how well the little squealer gets out (or receives) depending upon antenna connection point!

The direct URL for the schematic and a picture of the radio and display is
http://ouvaxa.cats.ohiou.edu/~post/MRT/two_tube.html

The general URL for the museum is at
http://www.library.ohiou.edu/MuseumR&T/museum.htm

73, Rich KB8TAD <rpost1@ohiou.edu>

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: vancleef@netcom.com (Henry van Cleef)
Subject: Re: Uses for differential amplifier scope plugin
Message-ID: <199701201051.DAA20629@netcom8.netcom.com>

As Nina West discourses
>
> Thanks again to everybody who responded to my question. The safety
> warnings about floating the ground input of the scope were welcomed and I
> hope absorbed by others. I do have some questions that were raised by
> your answers:
> 1. Is it safe to float the ground input of a passive meter (Simpson 260),

> battery-powered meter (DVM), or 2 wire plug VTVM (Heathkit V-7A)?
> For safety sake I would hookup the meter, put power on the unit under
> test, and then read the meter with my hands in pocket.

One of the reasons for having a Simpson 260 or equal is that it is completely isolated from mains power. The Simpson (and any other good multimeter) has good case insulation, and both the positive and negative leads are well-insulated from the case or anything you can contact. You want to watch out for test prod insulation. Most of it claims to be good to 600 volts. However, handle one test prod at a time if you are talking more than 100 volts or so away from earth ground.

> 2. Hank Vancleef discussed using the CA (which has an A+B) and the 82
> plugins for differential measurements. Wouldn't a differential
> measurement be A-B? Also, on my 82 I see A ONLY, CHOP, ALTERNATE, and B
> ONLY modes. Am I missing something?
No, I am missing something. The 82 does not have the added mode. To do differential measurements with a 585, you have to use an 81 or 81A adapter and a letter-series or 1A type plugin. Also, the 580 series do not have DC triggering. These are reasons why I prefer the 530/40 series over the 580 series for general work.

> 3. Does anyone have experience with measuring brainwaves with a boatanchor
> oscilloscope? Stan Griffith's response and his book state that the E
> plugin (20kHz BW, .05mv/cm sens) was used for "biological research".
>
While this equipment was used 30-40 years ago for medical electronics, I wouldn't recommend it today. Modern medical instrumentation has a lot greater isolation from ground than the old stuff---if it uses AC mains power at all. I think we've got an M.D. or two on the list who can fill in the blanks on my comments.

Back in the sixties, Tek built a patient monitor for use in intensive care. This was a plug-in-the-wall transistorized unit that monitored pulse rate, respiration (breathing) rate, and blood pressure. I think it used the same box as the 422. I don't recall whether it was put in production or not. This type of device has long since been supplanted by small battery-powered telemetry devices, which are completely detached from mains power, and which you can hang on a strap around the patient. As I recall, all of the parameters monitored are measured by transducers, not by direct electrical connection to the patient.

There are several ways to take heart nerve signals and display them. The plain two-wire electrocardiogram, which I think always has been the most common, and still is (M.D. comment?) involves piercing the skin with two electrodes near the heart and connecting them to an

oscillograph (chart recorder type with a galvanometer pen) or a scope. As I recall, these signals are low-level for a scope---in the microvolt/low millivolt range. There are three components to the displayed pulse, known as P, T, and R. The P wave is small, the T is large, and the R is a small trailer. Normal resting heart rate is on the order of 60-70 cycles per minute (NOT herz)---a little more than one per second. The equipment, if being used as a diagnostic tool, has to handle a range of from about 40 to somewhere above 120 cycles per minute, but the PTR display is in millisconds, as I recall. This means either free-run the time axis (which is fine with a chart recorder) or trigger on the small P wave, which is tricky. A digital setup, with a rotating input buffer that continuously stores 10 or 15 milliseconds of data, and triggering on the T wave, allows display of the previous P wave, which is still stored in the buffer. This is the opposite of "delaying" sweep---in this case we are "delaying" trigger. This technique was also used in the 3T2 and 5T3 (never manufactured) sampling timing units. Note that sampling scopes do the sample-and-hold function; digital scopes also digitize the data gathered by the sample-and-hold.

Another technique that works in (electrically) noisy environments is generally called "Pulse Height Analysis." This uses a digital input, and stores the data of interest surrounding the trigger in random-access-memory. How this works is conceptually fairly signal. Assume the condition where there is no input signal, but a repetitive trigger. At any instant in time, white noise says that the input signal has a +/-.5 (note, two solution, plus and minus) probability, and that the absolute magnitude of the signal from 0 to some value will be randomly distributed over the range of values. Thus, if you integrate the noise over some long period, the integral becomes zero. Add to this a repetitive wave coincident with the trigger. The probability that this wave has a specific value is near 1, both in sign and magnitude; thus, if you integrate it, you will get some big numbers (the magnitude of the wave multiplied by a constant). This is a way of pulling low-level data out of noise. This method works with EKG (cardiographic) signals, which are free-running, and with encephelographic (EEG) signals IF you are monitoring for an EEG response to an external stimulus. One method which predates the CAT scan method was to put a bunch of EEG electrodes on the scalp and flash pulses of light at the subject. If you use the pulse height analysis technique (with some more refinement) you can pull out EEG responses to the light, and if you map the EEG display to the light positions, you can quickly locate a lesion (problem----infection, tumor, etc.) in the brain by anomalies in the map.

Another form of electrocardiogram is the vector electrocardiogram. This is a two-axis display of signals---a Lissajous figure setup---using three or four cardiographic probes, which have to be put

in the right places. As with the two-axis, the P, T, and R waves appear on the CRT, but as three loops. The direction of beam travel as it traverses those loops is significant, and chopping the signal on the Z axis, with a sawtooth, to make the direction of travel visible, is part of the setup. The vector EKG, as I understand it, will "flag" some cardiological problems where the two-axis PTR wave appears normal.

EKG signals? Yes, you can put similar electrodes in the scalp and monitor any number of channels in any combination. Once again, levels are low for a scope---on the order of a millivolt or less---and noise is a consideration. From the untrained observers's perspective, the signals exhibit a lot of randomness.

I'll mention hear that any of these signals don't mean anything unless you know what you are looking for. I.e. if it's living, breathing, walking, and talking, you'll see cardiographic PTR waves on a display. "Normal" vs. "abnormal" is a rather subjective thing to interpret. As I've mentioned, as an electrical phenomenon and instrumentation problem, EEG signals are quite random, and getting any meaning out of them requires some knowledge of what's "normal" and what isn't. I'd compare the interpretation of these signals with the interpretation of power supply ripple on an 80 power supply. Anyone looking at these supplies is going to see ripple. Is it a lot of ripple? A little ripple? What's the shape of the ripple? And so forth. If you do this every day, abnormalities are going to pop right out, and you'll notice it----"This ain't normal ripple." The electronics type can look at PTR waves and see PTR waves, but knowing, "hey, this ain't what we want" is sort of like handing an MD with no electronics knowledge a scope probe, having him probe for power supply ripple, and expecting him to know whether it's the right ripple or not.

In the case of EKG and EEG signals, we are dealing with the analog between the vertebrate nervous system and Maxwell's equations----that signals travel along the nervous system as they do in a transmission line, and that as they travel, they generate electrical signals. The magnitude of those signals, the rate at which they travel, and any amplification or attenuation, can all be significant. However, for signals to be meaningful (and we are dealing with a system that is electrically "noisy") we have to be dealing with stimulus-response stuff---you have to put some known signal into the system at some known type, to pick out the signal of interest from the noise. Given the dimensions of the signals themselves, the times involved (generally very long, in terms of analog scope display CRT persistence), rep rates, and background noise, digital techniques, data storage, etc. are all desirable. Even in the sixties, outfits like Scientific Atlanta, Nicolet Instruments, and TMC made specialty digital devices for this work, and DEC did some work in these areas.

It is, of course, very desirable to keep human and animal bodies isolated from the possibility of shock, and battery-powered devices with safely isolated passive inputs are to be preferred (and have come to be, more-and-more, required). It doesn't take much current through the cardiogram probes to make the PTR waves cease flowing, and once they stop, they are very hard to get started again.

I've mentioned transducer devices, like patient monitors. One of the basic parameters measured in medicine is "blood pressure". The traditional tool for this is a mercury manometer with a cuff, along with a stethoscope. The measuring process is simple to describe: wrap the cuff around the patient's arm, listen near an artery, and start pumping up the pressure in the cuff. When the noises start to change, you've reached the pressure minimum. Record that number. When the noises stop, you've reached the pressure maximum. The results are the two numbers, expressed as mm of mercury rise over atmospheric in the manometer, with numbers like 120 (mm) over 80 (mm) maximum and minimum being typical. Note that the pressure in the artery is what is NOT being measured. The pressure in the cuff required to cut off blood flow---like putting a C-clamp on a garden hose to cut off flow---is what is being measured. A microphone transducer, theoretically, could be used to sense pulsations in the artery, and calibrated to the familiar mm. of mercury units, however, the technique being used is very different. We are now measuring displacement in a free system, not the effects of constraints on the system. Yes, you can hang an analog meter on the transducer output, watch it wave, and work from that---or put it on a scope display. In a monitor operation, what we are looking for is not absolute measurements, but changes in the system. So if you hang the transducer on the patient, and it records a high of 70, and a low of 35, and you store those numbers somewhere in the system, you've established "normal," although the manometer method might produce 160/100 mm. The monitor, of course, can also store the repetition rate, say 800 msec. What the monitor wants to do is raise an alarm if the numbers fall off to 50/30 and/or the rep rate goes to 500 msec. The idea of substituting a transducer-display for general purpose measurement of blood pressure is a little difficult to justify. The common manometer setup is dirt simple, and if it works at all, it's in calibration. There aren't any pots or adjustments on a column of mercury. I don't know what qualitative information can be taken out of the stethoscope used in the traditional method----certainly, if pumping the manometer up a little suddenly produced Hootie and the Blowfish in the stethoscope, something might be wrong that is unusual, and if pumping up the stethoscope more produced the sounds of a '53 Plymouth with a loose connecting rod, something would really be wrong.

Medical instrumentation goes a lot farther than oscillography, and I

think that with the availability of digital devices, data storage, and semiconductor setups that don't require a lot of power, a lot of biological stuff is better served by something other than an old vacuum tube analog real-time scope.

--
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Hank van Cleef
E-mail vancleef@netcom.com or vancleef@tmn.com
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From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: Sifakis George <sifakis@isoft.intranet.gr>
Subject: Want info: 1920s ship radio rooms
Message-ID: <32E3B86A@msgw.isoft.intranet.gr>

As the title says, in order to restore such a radio room I'm looking for any photographs of ship radio rooms, preferably military, of that period. Any help such as pointers to Web sites, books or magazines will be appreciated. Any costs will be reimbursed.

Thanks and 73
George   SV0KA   sifakis@isoft.intranet.gr

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: Russell_Schroeder@xn.xerox.com (Schroeder,Russell G)
Subject: Wanted: Manual for HP-491C TWT Amp.
Message-ID: <"<03ABE3328190677C>03ABE3328190677C@X-WB-0207-MS2.XN"@-SMF->

Hollowstaters,

I am looking for a manual (or copy) for a HP-491C 2-4 Ghz TWT amplifier. Any leads on a manual would be appreciated. Will cover costs of copying and shipping. Thanks

73 Russ W2DYY

Russell_Schroeder@xn.xerox.com

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: "Douglas Palmer Jedi" <palmerdo@plhp002.comm.mot.com>
Subject: WANTED: Old Japanese Telegraph Keys
Message-ID: <9701201312.ZM25539@plhp451.comm.mot.com>

Greetings, Boatanchorites:

All the discussion about Ben Nock's WW2 Japanese radio has gotten my juices flowing.
Over the past few years, I have become intensely interested in Japanese Telegraph keys. I have visited Japan twice (my wife is Japanese), and have accumulated quite alot of information/pictures about Japanese keys and their history, as well as a few interesting devices. I have even had the pleasure of corresponding (on numerous occasions) with the president of Hi-Mound Electro Company, who has been in the business of making telegraph keys since 1938. (move over, Ted McElroy !!)

I know some Japanese myself, but my wife translates most of the material for me, which can take some time, due to the technical nature of some of the literature. However, it's worth it to be able to learn something that few Americans know about.

I'm always looking for interesting examples to add to my collection. If you prefer to trade, I have lots of American straight keys and bugs that I can swap. I've found that most American collectors prefer American keys over the foreign stuff, anyway.

Thanks,

Doug, K4KEY

From boatanchors@theporch.com Mon Jan 20 15:11:06 1997
From: John Roccaro <jroccaro@chesco.com>
Subject: WTB 3Kc Fil for 51J4
Message-ID: <Pine.BSI.3.91.970120114306.12588A-100000@carriage.chesco.com>

I've been asked to post this request for a serious buyer who
is currently among the internet-challenged. I will forward
contact information for him.

From boatanchors@theporch.com Mon Jan 20 20:58:54 1997
From: John Roccaro <jroccaro@chesco.com>
Subject: WTB Bird Wattmeter Slugs
Message-ID: <Pine.BSI.3.91.970120160042.26487A-100000@carriage.chesco.com>

I thought I saw some correspondence about this but does anyone
know of someone who sells these things as used items? I just
picked up a Bird meter kinda cheap and want to get a few of the
basic slugs for it like H250, H2500, maybe some in the VHF/UHF

ranges. TNX.

From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: w7fg <w7fg@w7fg.com>
Subject: WTB: Hallicrafters SX-27 Manual
Message-ID: <199701200529.XAA12486@newton.cimnet.net>

I'm looking for a SX-27 Manual, preferrably original but not
necessary will accept a good copy.

Gary


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          ------------------------------------
          |  W7FG Vintage Manuals              |
          |  3300 Wayside Drive                |
          |  Bartlesville, Oklahoma 74006      |
          |                                    |
          |  Telephone: 918-333-3754           |
          |  Orders Only: 800-807-6146         |
          |                                  |
          |  HomePage:  http://www.w7fg.com    |
          |  E-Mail w7fg@w7fg.com              |
          ------------------------------------
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From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: w7fg <w7fg@w7fg.com>
Subject: WTB: TMC GPR-90 Receiver
Message-ID: <199701200529.XAA12489@newton.cimnet.net>

A friend is now trying to find a GPR-90 in decent shape, any out there
for sale or Trade??

Gary


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          |  Bartlesville, Oklahoma 74006      |
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          |  HomePage:  http://www.w7fg.com    |
          |  E-Mail w7fg@w7fg.com              |
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From boatanchors@theporch.com Mon Jan 20 09:08:04 1997
From: w7fg <w7fg@w7fg.com>
Subject: WWTB: Drake R-4 Series Receiver
Message-ID: <199701200525.XAA12475@newton.cimnet.net>

I'm looking for a Drake R-4 Series receiver, 1st choice would be a R-4B.
Any floating around out there??

Gary


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           ------------------------------------
           |  W7FG Vintage Manuals              |
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              |                                 |
           |  Telephone: 918-333-3754           |
           |  Orders Only: 800-807-6146         |
              |                               |
           |  HomePage:  http://www.w7fg.com    |
           |  E-Mail w7fg@w7fg.com              |
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